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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/828,583	04/21/2004	Hirotooshi Shimizu		5515

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EXAMINER

KUMAR, SRILAKSHMI K

ART UNIT	PAPER NUMBER
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2629

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01/04/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/828,583	Applicant(s) SHIMIZU, HIROTOSHI	
	Examiner Srilakshmi K. Kumar	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-8 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The following office action is in response to the new application filed on April 21, 2004. Claims 1-8 are pending.

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. Figures 7 and 8 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
3. The drawings are objected to because Applicant teaches Figures 8A, 8B & 8C, however does not include these figures in the Brief Description of Drawings, nor are the figures separately discussed in the Description of Prior Art. Applicant only teaches in the Specification as Fig. 8.. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be

labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 3, 4, 6 and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Bassetti et al (US 6,046,735).

At to independent **claim 1**, Bassetti et al teach a display control device (Fig. 7) comprising: a cathode ray tube control unit (Fig.7, item 52, CRT BFR) for transferring, to a CRT display (Fig. 7, item 24), a CRT transfer clock signal (Fig. 7, VCLK), a video data signal (Fig. 7, out of 50, col. 8, lines 44-45) and a synchronous signal in accordance with the CRT transfer

clock signal generated from a first clock signal having a constant and stable cycle (col. 8, lines 55-62, a stable clock signal is described); and a liquid crystal display control unit (Fig. 7, item 62) for transferring, to a LCD display (Fig. 7, item 22), a LCD transfer clock signal (VCLK_SS, a modulated clock signal), a video data signal (Fig. 7, out of 50, col. 8, lines 44-45) and a synchronous signal in accordance with the LCD transfer clock signal generated from a second clock signal as a spread spectrum clocking signal generated based on the first clock signal (col.9, lines 12-22, 32-34, describing a modulated clock signal of VCLK_SS which is spread spectrum clocking signal based off the first clock signal VCLK in order for proper displaying of images and to reduce EMI).

As to dependent **claim 3**, limitations of claim 1, and further comprising, Bassetti et al teach wherein said CRT control unit and said LCD control unit transfer the video data at such timing that the same picture is displayed substantially simultaneously on the CRT display and on the LCD display (Fig. 9 teaches a timing diagram for the displays, and in col. 12, lines 2-44, Bassetti describes where the CRT includes a long horizontal blanking period, therefore enabling the displaying of the same picture substantially simultaneously on the CRT and LCD display).
same picture

As to dependent **claim 4**, limitations of claim 3, and further comprising, Bassetti et al teach wherein the readout timing is generated synchronizing with a display cycle of the LCD display (col. 12, lines 15-36, where the LCD and CRT are synched), said LCD control unit receives the video data for the transfer object that are stored on the video memory each time the readout timing is generated (col. 12, lines 19-36, where the LCD pixels are transferred based on a modulated clock signal, therefore, the pixel information is transferred for several clock periods

more than the CRT), and said CRT control unit receives the video data for the transfer object which are stored on the video memory only in a case where the readout timing further synchronizing with a display cycle of the CRT display is generated (col. 12, lines 2-44, where the CRT pixel information is transferred in the amount of the un-modulated time. As the LCD and CRT are synched, the video data is received during the time for the CRT to display, and in the remaining synched time in order for the LCD to finish writing the data, the CRT does not receive any further data, instead will begin the horizontal blanking period).

As to dependent **claim 7**, limitations of claim 1, and further comprising, Bassetti et al teach digital visual interface (Fig. 7, shown by items 58 and 60), wherein in the case of displaying the picture on the CRT display, the video data from said CRT control unit are transferred to the CRT display via said digital visual interface (where the digital visual interface is shown by the DAC which is dependent upon the VCLK), and in the case of displaying the picture on the liquid crystal display, the video data from said LCD control unit, the horizontal/vertical synchronous signals and the second clock are transferred to the liquid crystal display via said digital visual interface (where the digital visual interface is taught by the EMI FIFO (60), where the data is received and is dependent upon the video data read out using the modulated second clock VCLK_SS) (col. 9, lines 12-22).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bassetti et al (6,046,735).

As to dependent **claim 2**, limitations of claim 1, and further comprising, in another embodiment, specifically, Figure 13, Bassetti et al teaches wherein said CRT control unit and said LCD control unit respectively receive video data for a transfer object which are stored on a video memory in accordance with readout timing generated from the second clock (specifically, in col. 14, lines 65-col. 15, line 11, where the video data for a transfer object is based on the second clock which is the modulated clock).

It would have been obvious to one of ordinary skill in the art to include the feature of where the video data transfer object is based on the second clock as shown by a different embodiment of Bassetti et al into the first embodiment of Bassetti et al as having the data based on the second clock into both the LCD unit and CRT unit reduces the maximum intensity of EMI emissions for both the LCD and CRT interface (col. 15, lines 9-11).

8. Claims 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bassetti et al (US 6,046,735) as applied to claims 1-4 and 7, and further, in view of Leung et al (US 6,580,432).

As to dependent **claim 6**, limitations of claim 1, and further comprising Bassetti et al do not teach wherein said display control device is structured, into one chip, together with said video memory for storing the video data for the transfer object.

Leung et al teach a spread spectrum FIFO and method for storing data for multiple displays similar to the invention of Bassetti et al. Leung et al in col. 2, lines 65-col. 3, lines 9,

where the display control device is structured into one chip together with said video memory for storing the video data for the transfer object. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the display control device on one chip together with video memory as taught by Leung et al into Bassetti et al in order for a compact structure.

As to dependent **claim 8**, limitations of claim 1, and further comprising, Bassetti et al do not teach wherein said display control device is structured, into one chip, together with a chip connecting a central processing unit (CPU), a main memory and an extension bus to each other, and serving as a bridge for the data therebetween. Leung et al teach in col. 2, lines 65-col. 3, line 9 where said display control device is structured, into one chip that includes a central processing unit or other processing devices, thus teaching display control device is structured, into one chip, together with a chip connecting a central processing unit (CPU), a main memory and an extension bus to each other, and serving as a bridge for the data therebetween. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include this feature of display control device is structured, into one chip, together with a chip connecting a central processing unit (CPU), a main memory and an extension bus to each other, and serving as a bridge for the data therebetween as taught by Leung et al into Bassetti et al in order for a compact structure.

Allowable Subject Matter

9. Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record does not teach a display control device for controlling a CRT and an LCD, and a first clock signal and a second clock signal as a spread spectrum clocking signal generated based on the first clock signal, and further comprising a monitoring unit monitoring a transfer quantity of the video data per unit time and *outputting a signal for controlling a width of the spread spectrum of the second clock in accordance with the transfer quantity of the video data.*

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Srilakshmi K. Kumar whose telephone number is 571 272 7769. The examiner can normally be reached on 9:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sue Lefkowitz can be reached on 571 272 3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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A handwritten signature in black ink, appearing to read 'Srilakshmi K Kumar', with a long horizontal flourish extending to the right.

Srilakshmi K Kumar
Examiner
Art Unit 2629

December 29, 2007